

EXHIBIT VI-2 (cont.)

PUBLIC DOMAIN ACTS AND RELATED CHAOS

Originally, the settlers were considered trespassers on public land. Eventually the government realized the need to make improvements on the wilderness to the west. In an attempt to control settlement, the federal government created several acts.

As time went by and conditions changed, the legislature attempted to amend the acts to fit the needs of the homesteaders, conditions of the land, and to ensure the intent of the original acts was followed. The amendments were usually too little too late. Also the administration of these laws changed. As a result, many promoters and ranchers abused the system and tied up large tracts of land.

What will follow is a summary of the public land acts. By familiarizing yourself with them, it will be easier to understand the problems we may encounter.

Preemption Rights:

This was the first method available to settlers to acquire title to Public Domain lands. For many years (from 1830) the preemption privilege secured a settler's right to purchase the tract of land he was on. Originally the right of preemption was only for surveyed public lands not exceeding 160 acres. The settler had to pay a fixed price of \$1.25 per acre. A preemption right was a possessory right, established by the construction of a dwelling and the making of improvements.

The surveyed land provision of the act was changed in 1842, but purchase and patent could not take place until after the lands were surveyed. The act provided that the preemptor should file his declaration of intent to purchase within three months after settlement, or in case it wasn't surveyed at the time of settlement, within three months after the filing of the survey plat. After these lands were surveyed, the actual property boundaries stayed the same even if they didn't fit in the rectangular system.

Homestead Act (May 20, 1862):

Through this act, any American citizen "who has never borne arms against the United States Government or given aid and comfort to its enemies" could acquire 160 acres by:

- filing an application with the General Land Office
- settling for a 5 year "prove-up" period
- cultivating 1/8 of the land

At that time, the settler could file a Certificate Homestead

EXHIBIT VI-2 (cont.)

(figure A) with the local United States Land Office. On presentation of this certificate to the Commissioner of the General Land Office (G.L.O.), the Homesteader is entitled to receive a patent (Figure B) for the land. When the patent from the G.L.O. is filed with the County Clerk and Recorder, it becomes the first deed on the land.

Settlers were permitted to commute their homestead entries to cash. After living on the land for 6 months, it could be acquired by paying \$1.25 per acre. During the early years of the operation of the Homestead Act, the commutation privilege was not often chosen by the settler. Then the settlers were genuine homesteaders and were on the land because they wanted farms, rather than to take advantage of the system.

On land that was granted to the Railroad, a settler could only claim 80 acres until 1880 when he could claim 160 acres. These lands could be commuted by paying \$2.50 per acre.

After 1880, a settler could count the time they spent on unsurveyed lands towards their "prove-up" period.

After 1891, fourteen (14) months residency was required before commuting was allowed, but 6 months was allowed to elapse before the establishment of a residence was required. Eventually residency for the full 14 months was required.

In the early 1900's, the production of wheat, flax, and other crops was spreading. Land could be brought into the market at \$1.25 or \$2.50 per acre a quarter section at a time, by means of the homestead privilege. Many instances have been recorded when a single crop brought values sufficient to buy and improve the farm it was grown on.

These facts encouraged speculators. No sooner was the time right for commutation than the land was made the basis for a loan. Then it might be held as a speculation for a few years, or it was sold at once. The prices during the early part of the decade ranged from \$400 to \$2600 for a quarter section. The sales were made to farmers who wanted large farms.

The fact that the homestead was too small to fit the grain producing conditions of the Northwest is an important point in explaining why homesteaders sold out so quickly.

Forest Homestead Act:

The Forest Homestead Act of 1906 opened to agricultural entry forest reserve lands which:

EXHIBIT VI-2 (cont.)

- are chiefly valuable for agriculture
- are not needed for public purposes
- are in the opinion of the Secretary of Agriculture, may be occupied without injury to the forest.

Applications for land not exceeding 160 acres or one mile in length were made to the Secretary of Agriculture. The land was examined by a field agent of the Forest Service and if his report was favorable, the land was listed with the Department of the Interior. After that, the homestead proceeds as any other entry under the Homestead Law, but no commutation was permitted.

The law differs from all other agricultural land laws in that the land must be chiefly valuable for agriculture and that the entry may be described by metes and bounds instead of legal subdivision of the public land survey. Sometimes when metes and bounds descriptions were used, claim clubs were organized. These clubs were groups of Homesteaders. They felt, by banding together and sticking up for each other, it would give a little more clout to their metes and bounds surveys.

Enlarged Homestead Act:

The ready availability of free or cheap land and the new method of dry farming made the Montana Homestead boom possible. However, high grain prices (which climbed from 1897 to 1920), promoters, and the Enlarged Homestead Act of 1909 (which doubled the amount of land available per person) launched it. Requirements within this Act provided that 1/4 of the land should be cultivated; that residence be required; and that the land should be nonirrigable. This Act may be looked on as a beneficial change in the public land policy made to accommodate the requirements to the peculiar conditions for the arid regions as compared with the humid regions it was designed for.

Three Year Homestead Act:

The Three Year Homestead Act of 1912 reduced the waiting period from 5 years to 3 years and permitted a homesteader to be gone for 5 months out of the year. It also gave added incentive to fulfill the residence requirements rather than commuting.

Stock Raising Homestead Act of 1916:

The Enlarged Homestead Act adapted the size of the farm to the type of cultivation, but there remained a large area of land in the Mountain States which was not adapted to the cultivation of any merchantable crop. This land could be used for grazing and for raising forage crops, which, to be worthwhile must be fed to cattle.

The more important revisions of the Stock Raising Homestead Act are:

EXHIBIT VI-2 (cont.)

- that 640 acres shall be the maximum homestead
- that the land must be designated by the Secretary of the Interior as "stock raising" land
- that the land must
 - a. have a surface good for only grazing and forage
 - b. contain no merchantable timber
 - c. have no convenient irrigation facilities
 - d. be of such quality to require 640 acres to support a family
- that certain improvements rather than a certain amount of cultivation are required on the homesteads
- no commutations are allowed
- coal and mineral rights are reserved
- waterholes are reserved for public use, also land on certain "trails" leading to these watering places. (This one sounds like trouble.)

No progress was made in the administration of this law until 1918, due to the failure of Congress to appropriate funds to carry on the classification of lands. (Some things never change.)

Much of this land would require more than 640 acres to support a family. The homesteader himself was required to make the decision as to the feasibility of supporting himself and family on any given piece of land.

Unfortunately, most homesteaders were not qualified to do this. As a result, there were a large number of sorry homesteaders; a group of stockmen bankrupt due to the breaking up of the range; and, a great many acres of good shortgrass plowed up and rendered worthless for many years to come.

Taylor Grazing Act:

The Taylor Grazing Act of 1934 withdrew all public lands from entry for the purpose of classification. The areas that were best suited for grazing were divided into Grazing Districts and leased to ranchers. This Act virtually halted agricultural homesteading in the Western Public Land States.

Desert Land Act of 1877:

The Desert Land Act was designed to fit the more arid conditions of the west. It authorized the sale of a 640 acre section of land to a settler who would irrigate 1/8 of it within 3 years after filing an application. It was meant to encourage reclamation and improvement of arid lands. Entries were originally permitted on unsurveyed land. A \$.25 per acre fee was made at the time of filing and a one dollar per acre fee at the time of making proof of compliance with the law.

EXHIBIT VI-2 (cont.)

The problem was that farmers could seldom irrigate such large plots without government support. Cattlemen would claim a section of range, make a token effort to irrigate and use it for pasture until the end of the 3 year "prove-up" period. Then forfeit the land to the government with the use for 3 years at little expense.

In August of 1890, an act was passed that restricted the amount of agricultural desert entry land that could be acquired from the government to 320 acres.

The Act of March 1891 amended the Desert Land Act and stipulated that:

- improvements amounting to \$3.00 an acre, one dollar an acre for 3 years, should be put toward reclamation.
- 1/8 of the land should be cultivated
- persons might associate together in a project for watering their several entries
- only citizens of the state in which the land was situated were allowed the privilege of entry
- required irrigation before patent could be issued on desert homesteads
- repealed the preemption laws
- granted rights of way for ditches, canals, and reservoirs on public lands. (Plats of these rights of way had to be filed with the land office showing the locations. These plats are frequently incorrect and do cause some problems when the sections are resurveyed.)

The Act of March 1915 amended the Desert Land Act and provided that:

- 3 years additional time be granted to entrymen who have spent the \$3.00 per acre in an effort to irrigate and cultivate their land, and can show a reasonable prospect of doing so within 3 more years.
- Those that have spent the money without prospect of getting water have the opportunity of getting title under the Homestead Act.
- Those failing to get water were offered the privilege to pay \$.50 per acre to the government; then expend \$1.25 per acre on improvements, cultivate the land for 3 years, and finally pay \$.75 per acre additional to the government and receive title.

Carey Act of August 18, 1894:

Under this act, the federal government agreed to donate certain states a quantity of land not to exceed 1,000,000 acres

EXHIBIT VI-2 (cont.)

each, which they should cause to be settled, irrigated, and part cultivated. To obtain patents to these lands from the government, it required that at least 5 of each 40 acres must be irrigated. Where it was impractical to comply with this requirement, the non-irrigable lands were relinquished to the state government.

Also under this act, contracts were granted for the construction of irrigation systems, and the right to sell and dispose of water rights to the settlers or purchasers of public lands.

When the Carey Act enterprises (improvements) were completed and paid for, they were turned over to local companies. Stock in these companies were issued to the holders of the water rights, the enterprises thus became cooperative. Under the act, about a million acres have been patented to private parties.

Problems:

Most of the problems we will have with old public domain lands that have gone to private ownership stem from old surveys. Many of these surveys have errors in them. These errors are due to poor equipment, hostile environment, abundance of land, and lack of skilled surveyors.

In areas where no rectangular surveys have been conducted, section corners were often protracted, and therefore not very accurate. Surveys were tied into a known section corner if there was one within 2 miles. If there wasn't, a permanent location monument had to be erected. Very often these surveys will be in General Land Office (G.L.O.) plat books.

Most areas have been resurveyed. Originally the purpose of resurveys was to determine where the corner was established initially. Legislation providing for resurveys came about when it became apparent that the lines and corners of many older surveys were becoming so obliterated or distorted that their identification was in doubt. One stipulation of the resurvey laws was that no resurvey may be executed in such a way that it could impair the rights of the claimant of the lands affected.

The problem we may have is if an old map is sent with the claim, and the area has been resurveyed. The old map could show an inaccurate legal land description. When we come across these types of maps, they should be compared to recent U.S.G.S. maps or G.L.O. plat books.

Examples of Homestead Entry Survey maps will follow.

EXHIBIT VI-2 (cont.)

MINERAL SURVEYS

The Mining Law of 1872 opened the valuable mineral deposits in the lands belonging to the United States to further prospecting and development. One of the requirements for obtaining a patent to a mining claim was a boundary survey. The survey was to be paid for by the claimant, but made by a government-appointed surveyor. Bearings are referred to the true meridian and distances are in feet.

The position of the claim is tied into the nearest section or quarter section corner. If no public corner exists within 2 miles, a location monument is established on some prominent point having good visibility from every direction. Monuments set by the original locator are used as the true location of the claim. The Act of April 28, 1904, declared mineral survey corners to have the same legal status as rectangular survey corners. They were unchangeable, and the Surveyor General had to honor them.

A mineral claim until patented is a partial right since title to the land is retained by the government.

In addition to determining the size of a claim and setting permanent boundary corners, the surveyor records topography, location of shafts and tunnels, location of the vein where it crosses the end lines, conflicts with adjoining claims and location of springs, salt licks, and mill sites.

Problems:

Location surveys for unpatented mining claims may be made by the claimant or someone employed by him. Only final surveys for patent must be made by a United States mineral surveyor. Very often location survey maps are little more than glorified sketch maps. If one was submitted with a water right claim, it would be reckless to get a legal land description from it.

Old maps for patented mining claims, or copies of U.S. Forest Service or Bureau of Land Management maps with patented ground delineated on them, may be submitted with a water right claim. These should be compared with the General Land Office plat maps for accuracy. The legal land description is the least of our problems when it comes to mining claims. Flow rate and volume are the juicy ones.

Copies of mineral survey plats are attached.

EXHIBIT VI-2 (cont.)

REFERENCES CITED

- McGraw-Hill Inc. 1966. Surveying, Theory and Practice, by Davis, Foote, Kelly.
- American Association for State and Local History, Nashville, Tennessee, 1978.
Montana, A Bicentennial History, by Clark C. Spence.
- John Wiley & Sons, Inc. 1957, 1969. Boundary Control and Legal Principles, by Brown, Landgraf, Uzes.
- University of Washington Press 1976. Montana. A History of Two Centuries, by Malone, Roeder.
- U.S. Government Printing Office 1980. Surveying our Public Lands, by U.S. Department of the Interior, Bureau of Land Management.
- U.S. Government Printing Office 1926. A History of the Rectangular Survey System, by C. Albert White.
- The University of Wisconsin Press 1965. A History of the Public Land Policies, by Benjamin Horace Hibbard.
- State Engineer's Office, Helena, Montana, June 1964. Water Resource Survey, Pondera County, Montana, Part 1.
- U.S. Government Printing Office, Washington, D.C. Surveys and Surveyors of the Public Domain 1785-1975, by Lola Cazier.

OTHER RESOURCES

Bruce Crawford
U.S. Forest Service
Lolo National Forest
Bldg 24, Fort Missoula
Missoula MT 59801

Dave Walter
Montana Historical Society
Library
225 North Roberts St.
Helena MT 59620

James Muhn
U.S. Department of the Interior
Bureau of Land Management
P.O. Box 25047
Denver CO 80225-0047

Dick Larimer
U.S. Department of the Interior
Bureau of Land Management
P.O. Box 36800
Billings MT 59107

CLAIM NO. _____

BASIN CORRECTION

WAS: _____

NOW: _____

EXPLANATION: _____

CHANGE MADE BY: _____ DATE: _____

APPROVED BY (if required): _____ DATE: _____

DNRC SUPPLEMENTAL DOCUMENT

EXHIBIT VI-6

DNRC RESERVOIR INFORMATION WORKSHEET

Claim No(s) _____

Claimant _____

Please complete as much of the following information as you can and return it to the Water Resources Regional Office within thirty (30) days. A guide for identifying the capacity of reservoirs, lakes, and ponds is provided. Please call our office if you have questions or need assistance.

A. Data

1. If a dam:

- a. Dam height _____
- b. Maximum depth (spillway height) _____
- c. Surface area when full, in acres _____
- d. Volume (acre-feet) _____ Compute as follows:
surface area in acres x maximum depth in feet x 0.4 = acre-feet
- e. How were these measurements taken? _____

2. If a pit:

- a. Length (feet) _____ Width (feet) _____ Depth (feet) _____
- b. Volume (acre-feet) _____ Compute as follows:
$$\frac{\text{Length in feet} \times \text{width in feet} \times \text{depth in feet} \times .05}{43,560} = \text{acre-feet}$$
- c. How were these measurements taken? _____

3. Is the reservoir: on the source _____ off the source _____?

B. Operation

1. If you have a headgate, drawdown tube or pump for diverting water from the reservoir, how much of your reservoir can you drain?
_____ 1/4 _____ 1/2 _____ 3/4 _____ All or _____ Percent
2. Period of year when water is diverted, impounded or withdrawn from the source into the reservoir or pit (month/day) _____ to _____
3. Period of year when water is diverted or released from reservoir or pit for use (month/day) _____ to _____
4. If the reservoir is off the source, how is water diverted from the source to the reservoir?
 - a. Headgate and/or Ditch (give dimensions and flow rate) _____

 - b. Pump (give size, type and flow rate) _____

 - c. Other (give capacity) _____

C. History and Condition

1. When was dam/pit built? _____

EXHIBIT VI-6 (cont.)

DNRC RESERVOIR INFORMATION WORKSHEET

Claim No(s). _____

Page 2

History and Condition (cont.)

2. When was it first used for purpose claimed? _____

3. Does the reservoir hold water? _____

4. Is the dam (or dike) washed out or breached? _____

If so, how long has it been this way? _____

5. Has dam been raised? _____ If so, when? _____

Did this add to freeboard, capacity, or both? _____

How much was the capacity increased? _____

6. Is reservoir also used for another purpose? _____

Please explain _____

Do you plan

Comments:

Signature: _____ Date: _____

____ Owner ____ Other: _____

FOR DEPARTMENT USE ONLY

DNRC Reservoir/Pit Estimate:

Dam Height: _____ ft Maximum Depth: _____ ft

Surface Area: _____ acres Capacity: _____ ac-ft

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Information obtained:

____ DNRC Data Sources ____ Claim File

____ Outside Data Sources:

____ Personal Interview: Date/Location _____

____ Telephone Interview:

Date/Time _____

____ Sent to Claimant: Date _____ Returned: ____ Yes ____ No

Reviewer: _____ Date: _____

**EXHIBIT VI-7
DNRC RESERVOIR WORKSHEET**

Claim Nos. _____

Reservoir Questionnaire Sent: Date _____ Returned: ____ Yes ____ No

A. History and Condition.

1. Date of construction _____ Date of first use _____
2. Condition _____

3. Purpose(s) of use _____
[example: IR-W999999, ST-W999998, MN-W999997]

B. Data on _____ Dam _____ Pit _____ Dam/Pit.

1. Dam Height _____
2. Maximum Depth (feet) _____
3. Surface Area when full (acres) _____
3. Maximum Storage Capacity (acre-feet) _____
4. Volume that can be drained from reservoir (acre-feet) _____
5. Evaporation
 - a. Annual gross evaporation (feet) _____
 - b. Annual precipitation (feet) _____
 - c. Annual net evaporation (feet) _____
 - d. Total evaporation _____ acre-feet
(net evap. X surface area)

C. Operation

1. Volume used each year (acre-feet) _____ Purpose: _____
_____ Purpose: _____
2. Carry-over storage (acre-feet) _____
3. Period of diversion from source into reservoir
_____ to _____ Purpose: _____
_____ to _____ Purpose: _____
4. Period of diversion from reservoir for use
_____ to _____ Purpose: _____
_____ to _____ Purpose: _____
5. Means of diversion from reservoir for use (type and diversion)

Completed By _____ Date _____

EXHIBIT VI-14
Reserved Rights Contact Letter
(Use Regional Office Letterhead)

August 1, 1993

Francis Rieman
USDI Bureau of Land Management
Montana State Office
Resources Division
P.O. Box 36800
Billings, MT 59107

RE: Reserved Water Rights in Basin 40J

Dear Ms. Rieman:

At the present time, 738 reserved water right claims exist in the Middle Milk River drainage (Basin 40J). Of those, 729 belong to the U. S. Department of Interior, Bureau of Land Management (BLM). These claims were filed on various sources for wildlife use.

Following are preliminary questions this Department has regarding these claims.

1. Are these claims indeed reserved rights?
2. Does BLM intend to retain them as reserved rights?
3. Does BLM plan on changing any of these claims from a reserved right to a state based right (use, filed, or decreed)?

A list of Basin 40J reserved water rights is enclosed for your review. After considering the above questions, please contact me at 265-5516 with your decisions.

Thank you for your assistance in this matter. If you have any question, please give me a call.

Sincerely,

Dan T. Cole
Water Resources Specialist
Havre Water Resources Regional Office

Enc.

EXHIBIT VI-15
Indian Cessions

This exhibit is an explanation of the Indian Land Cessions map provided to each field office. The fact being identified for the Water Court by this policy is that the priority date claimed for a particular water right precedes the cession of the land by Indians, thus the general date of settlement. The question of whether or not the claimed priority date is valid is a legal issue. We are merely identifying a fact for the Water Court.

In the table below, references are given for the particular acts of Congress and executive orders involved. Only land cessions are included; for information on other acts of Congress and executive orders concerning Indian tribes, please contact the program manager. The dates given correspond to those indicated on the provided map.

- Acts of congress are usually radifications of treaties or agreements with Indian tribes. The date is the date of the act rather than the date the treaty or agreement was signed. References for the acts of Congress are to statutes at large.
- Executive orders are orders from the President, and may or may not correspond to particular agreements with Indian tribes. Dates given are the dates of the order. Executive orders can be referenced by date.

ACTS OF CONGRESS

<u>Date</u>	<u>Reference</u>	<u>Tribe(s) Involved</u>
March 8, 1859	XII-975	Flathead, Kootenay [sic], Upper Pend d'Oreille
Feb. 28, 1877	XIX-254	Sioux, Northern Cheyenne, Arapahoe
April 11, 1882	XXII-42	Crow
May 1, 1888	XXV-113	Gros Ventre, Piegan, Blood, Blackfeet, River Crow
7March 3, 1891	XXVI-1039	Crow
Sept. 28, 1895	XXIX-353	Gros Ventre, Piegan, Blood, Blackfeet, River Crow
Oct. 9, 1895	XXIX-350	Assiniboin, Gros Ventre
April 27, 1904	XXXIII-352	Crow

EXHIBIT VI-15 (cont.)

EXECUTIVE ORDERS

<u>Date</u>	<u>Tribes Involved</u>
July 5, 1873	Gros Ventre, Piegan, Blood, Blackfoot, River Crow
Aug. 19, 1874	Gros Ventre, Piegan, Blood, Blackfoot, River Crow
July 13, 1880	Arikara, Gros Ventre, Mandan
July 13, 1880	Gros Ventre, Piegan, Blood, Blackfeet, River Crow

SOURCES: Eighteenth Annual Report, US Bureau of Ethology. US
Statutes at Large.

EXHIBIT VI-16

Contact Letter For
'62-'73 Groundwater Claims
(Use Field Office Letterhead)

August 11, 1993

Flora Sylvan, Hydrologist
Greentree National Forest
Floodplain, MT 59999

RE: Water Right Claims Nos. 99X-W589898 through W589909

Dear Ms. Sylvan:

The Department of Natural Resources and Conservation is presently examining water right claims in the Floodplain River drainage (Basin 99X). The above claims have a deficiency about which we are required to contact you.

Claims, nos. 99X-W589898 through W589909, are filed on groundwater developed between December 31, 1961 and July 1, 1973. Laws in effect at that time required that a groundwater appropriation form (GW1, GW2, or GW3) be filed at the local courthouse for all groundwater developments put to beneficial use from January 1, 1962 to July 1, 1973, and that the date of filing be the priority date.

Copies of the filings were not submitted for the above mentioned claims. Please check your records or the Clerk and Recorder's office in the county containing the development for these forms. If found, send a copy showing the filing date to this office.

If a priority date remains unsupported by a properly filed form, the deficiency will be reported to the Montana Water Court, which may hold a hearing on the matter.

Please respond to this request within thirty days. If you have any questions, don't hesitate to contact us.

Sincerely,
E. R. Satz
Water Rights Technician

Enclosures*

***NOTE:** This letter may be used to contact any claimant, either government agencies or private parties. Enclose copies of claim forms for all claimants other than the federal government.

EXHIBIT VII-3

DNRC REQUEST FOR PUMP INFORMATION

Claim No. _____

Claimant _____

Please complete as much of the following information as you can and return it to the Water Rights Field Office within thirty (30) days. Normally most of this data can be found on the pump, or in the literature that came with the pump. Please call us if you have questions or need assistance.

1. Pump System (current system)

- a. Has the output (flow rate) of this pump ever been measured? _____
If so, what was the maximum flow rate measured? _____
How was the measurement performed? _____
If never measured, what do you estimate the flow rate to be? _____
- b. Make and Model _____
- c. Type of Pump Centrifugal _____ Turbine _____ Submersible _____
Other _____ Explain: _____
- d. Type of Power Electric _____ PTO _____
Other _____ Explain: _____
- e. Approximate age of the pump _____
- f. Horsepower of the motor _____
- g. RPM's of the pump _____
- h. Diameter of the pump impeller _____
- i. Pressure at pump (psi) _____
- j. Intake and outlet pipe sizes _____
- k. Well (if involved) Casing Size _____
 Level of water in well _____
- l. Elevation difference between the water source and the highest point of use

- m. No. of nozzles and sizes (if involved) _____
- n. Please send a copy of the pump curve (if available).

EXHIBIT VII-3 (cont.)

DNRC REQUEST FOR PUMP INFORMATION (cont.)

Claim No. _____

2. Flow Rate. (current system)

a. Has the output (flow rate) of your system ever been measured? _____

If so, what was the maximum flow rate measured? _____

b. How was the measurement performed? _____

c. If never measured, what do you estimate the flow to be? _____

3. History and Condition.

a. When was the current pump system built? _____

b. When was water first used for the purpose claimed? _____

c. Is the water system in working order or operation? _____

d. If no to part 3.c., when was it last used? _____

4. Please describe the original system (if different from the current system), and all enlargements or reductions of the pump system and the date each occurred.

5. Plans, maps or photos of the water system would be helpful. In addition, copies of deeds, surveys, and operating licenses or permits would be useful.

Comments:

Signature: _____ Date: _____

____ Owner ____ Other:

EXHIBIT VII-5
DNRC REQUEST FOR GRAVITY FLOW PIPELINE INFORMATION

Claim No. _____

Claimant _____

Please complete as much of the following information as you can and return it to the Water Rights Field Office within thirty (30) days. Please call our office if you have questions or need assistance.

1. Diversion structure:

a. Method or type (spring box, culvert, dam, etc.):

b. Dimension (length, diameter (width), depth):

c. Materials (wood, metal, concrete, etc.):

2. Conveyance facility:

a. Material:

i. Type of pipe (copper, plastic, steel): _____

ii. Condition of pipe: _____

b. Dimensions and length (please note the diameter and length of each different type of pipe):

c. Slope or elevation change from point of diversion to place of use (water levels):

EXHIBIT VII-5 (cont.)

DNRC REQUEST FOR GRAVITY FLOW PIPELINE INFORMATION (cont.)

Claim No. _____

3. Flow Rate.

- a. Has the output (flow rate) of your system ever been measured? _____
If so, what was the maximum flow rate measured? _____
- b. How was the measurement performed? _____

- c. If never measured, what do you estimate the flow to be? _____

4. History and Condition.

- a. When was this gravity flow pipeline system built? _____
- b. When was it first used for the purpose claimed? _____
- c. Is the water system in working order or operation? _____
- d. If no to part 4.c., when was it last used? _____

5. Please describe all enlargements or reductions of the original water system and the date each occurred.

6. Plans, maps or photos of the water system would be helpful. In addition, copies of deeds, surveys, and operating licenses or permits would be useful.

Comments:

Signature: _____ Date: _____

____ Owner _____ Other: _____

EXHIBIT VII-7

DECREE EXCEEDED CONTACT LETTER
(Use field office letterhead)

Peter Langen
Star Route
Headgate Heights, MT 59122

30 October 1995

Re: Claim No. 99Y-W999999-00

Dear Mr. Langen:

The Department of Natural Resources and Conservation is examining the claims on Sweathouse Creek. The parties listed on the attached decree index claim to be successors in interest to the water right originally decreed to Mary Blake (Case 1011, Ravalli County). This water right is for 160 miners inches from Sweathouse Creek with a priority date of April 1, 1904.

The combined flow rate for all water rights now claiming the Mary Blake right totals 221 miners inches.

The claimants involved may now resolve the over-claimed Mary Blake right by reducing the total combined flow rate to 160 miners's inches. Otherwise, the Department is required to report the problem to the Montana Water Courts for their review at a later date.

You may call the Missoula Field Office at 721-4284 or stop at our office in the Holiday Village Professional Plaza. Thank you for your cooperation.

Sincerely,

Al E. Quot
Water Right Specialist
Missoula Field Office

/mk

enclosure

EXHIBIT VII-8

CALCULATION OF VOLUME GUIDELINES

The calculation of volume guidelines was based on the following definitions.

a. Total Consumptive Use - is the total amount of water, in inches, (assumes no rainfall) that a crop of alfalfa will use during an average growing season. These figures have been estimated by the Soil Conservation Service using the modified Blaney-Criddle Formula.

b. Average Annual Rainfall - an estimation of annual rainfall, in inches, for each climatic area. Estimates were made from an average annual precipitation map for the State of Montana by the Soil conservation Service using a 1953-1967 base weather period.

c. Effective Rainfall - is an estimate, in inches, of the portion of total rainfall that can effectively be used by the crop during the growing season.

d. 80% Chance of Occurrence - is a "reducing" factor used to estimate effective rainfall on a probability basis.

e. 80% Chance of Effective Rainfall - is the amount of effective rainfall that can be expected to occur 80% of the time. It is obtained by multiplying effective rainfall by the 80% chance of occurrence "reducing" factor.

f. Net Irrigation Requirement - is the depth of irrigation water, in inches, that is required consumptively for crop production.

It should be noted that many factors operate singly or in combination to influence the amounts of irrigation water consumed by plants. The empirical formulas (modified Blaney-Criddle and Jensen-Haise) estimate consumptive use primarily based on climatic factors. For particular situations, these seasonal consumptive use figures may be an overestimation due to the unavailability of irrigation water supply, water quality, soil type, and soil fertility.

Total consumptive use figures have been estimated by the Soil Conservation Service using the modified Blaney-Criddle formula. Research conducted through the Montana Cooperative Extension Service and Washington State University Aricultural Experiment Station using the FAO Food and Agriculture Organization) Blaney-Criddle method indicates that the modified Blaney-Criddle formula underestimates total consumptive use by approximately 20%.

In an article published in the 1984 ASAE transactions, researchers at the University of Wyoming found that the SCS Blaney-Criddle requires an upward adjustment of 10% per 1000m altitude increase above sea level. Using this report for Montana, the SCS consumptive use figures were increased by 10% for climatic areas I and II, 15% for climatic area III, and 20% for climatic areas IV and V.

EXHIBIT VII-8 (cont.)

Seasonal consumptive use figures per climatic area have also been calculated using the Jensen-Haise method by J.W. Bauder, Montana Cooperative Extension Service in a guide entitled Scheduling Irrigation In Montana. The results of this various research are shown in Table A.

Total consumptive use standards to be used per irrigated acre are shown in Table A. The Water Court Standards for total consumptive use represents a slight compromise which tends to agree with the research done to date. The most direct correlation can be found between the Water Court revised standard and the application of the University of Wyoming study adjustments to SCS modified Blaney-Criddle. One will note that the only real variation lies in total consumptive use figures in climatic area five. Application of the University of Wyoming study results in a derivation of 17.2 inches/acre/year while the revised Water Court Standard is 20.0 inches/acre/year. This upward adjustment results in a higher water requirement for the area. Adjustment was made primarily due to our feeling that SCS climatic area five reflects and undefined and possibly unrealistic deviation from the other five zones. Therefore, instead of leaving the climatic area at 17.2, an interval decrease of 6.8", below zone IV we suggest raising it to 20", in interval decrease of 4". Such an adjustment for use in a capping standard is favorable to the users.

Referring to Table B, the three different volume standards have been calculated based on type of irrigation system. The determination of net irrigation requirement follows the procedure set forth in Irrigation Water Requirements, Technical Release No. 21 by the Soil Conservation Service.

Table A
Total Consumptive Use per Acre
Per Growing Season

Area	Climatic				
	I	II	III	IV	V
Modified Blaney-Criddle By SCS (inches)	28.99	25.98	23.03	19.96	14.33
U. of Wyoming report (inches)	31.9	28.6	26.5	24.0	17.2
FAO Blaney-Criddle (inches)	34.8	31.2	26.5	24.0	17.2
Jensen-Haise Report By Bauder (inches)	34.4	32.2	30.0	28.4	26.4
Water Court Standard (inches)	32.0	29.0	26.5	24.0	20.0

EXHIBIT VII-8 (cont.)

Table B
Determining Volumes by Climatic Area

	I	II	III	IV	V
Total Consumptive Use (inches)	32.00	29.00	26.50	24.00	20.00
Average Annual Rainfall (inches)	12.00	13.00	14.00	15.00	16.00
Effective Rainfall (inches)	6.85	6.63	5.53	5.14	3.74
80% Chance of Occurrence	.69	.70	.71	.72	.73
80% Chance of Effective Rainfall (inches)	4.73	4.64	3.93	3.70	2.73
Net Irrigation Requirement (inches)	27.27	24.36	22.57	20.30	17.27
Water Spreading Systems, Sub-Irrigation, and Natural Overflow Volume (AF/A)	2.3	2.0	1.9	1.7	1.4
Sprinkler and Pumped Diversion Systems (50% Overall Efficiency) volume (AF/A)	4.5	4.0	3.8	3.4	2.9
Flood Systems (20% Overall Efficiency) volume (AF/A)	11.4	10.2	9.4	8.5	7.2

EXHIBIT VII-9
DNRC EXAMINATION WORKSHEET POU ADDENDUM

Page ____ of ____ Claim # ____
 Data Source #1 _____ Date _____

PARCEL	ACRES	LOT	BLK	QTR SEC	SEC	TWP	RGE	CNTY
001	_____	_____	_____	_____	_____	_____	_____	_____
002	_____	_____	_____	_____	_____	_____	_____	_____
003	_____	_____	_____	_____	_____	_____	_____	_____
004	_____	_____	_____	_____	_____	_____	_____	_____
005	_____	_____	_____	_____	_____	_____	_____	_____
006	_____	_____	_____	_____	_____	_____	_____	_____
007	_____	_____	_____	_____	_____	_____	_____	_____
008	_____	_____	_____	_____	_____	_____	_____	_____
009	_____	_____	_____	_____	_____	_____	_____	_____
010	_____	_____	_____	_____	_____	_____	_____	_____
011	_____	_____	_____	_____	_____	_____	_____	_____
012	_____	_____	_____	_____	_____	_____	_____	_____
013	_____	_____	_____	_____	_____	_____	_____	_____
014	_____	_____	_____	_____	_____	_____	_____	_____
015	_____	_____	_____	_____	_____	_____	_____	_____
016	_____	_____	_____	_____	_____	_____	_____	_____
017	_____	_____	_____	_____	_____	_____	_____	_____
018	_____	_____	_____	_____	_____	_____	_____	_____
019	_____	_____	_____	_____	_____	_____	_____	_____
020	_____	_____	_____	_____	_____	_____	_____	_____

_____ Total Acres This Page Contact Range=_____to

Data Source #2 _____ Date _____

PARCEL	ACRES	LOT	BLK	QTR SEC	SEC	TWP	RGE	CNTY
001	_____	_____	_____	_____	_____	_____	_____	_____
002	_____	_____	_____	_____	_____	_____	_____	_____
003	_____	_____	_____	_____	_____	_____	_____	_____
004	_____	_____	_____	_____	_____	_____	_____	_____
005	_____	_____	_____	_____	_____	_____	_____	_____
006	_____	_____	_____	_____	_____	_____	_____	_____
007	_____	_____	_____	_____	_____	_____	_____	_____
008	_____	_____	_____	_____	_____	_____	_____	_____
009	_____	_____	_____	_____	_____	_____	_____	_____
010	_____	_____	_____	_____	_____	_____	_____	_____
011	_____	_____	_____	_____	_____	_____	_____	_____
012	_____	_____	_____	_____	_____	_____	_____	_____
013	_____	_____	_____	_____	_____	_____	_____	_____
014	_____	_____	_____	_____	_____	_____	_____	_____
015	_____	_____	_____	_____	_____	_____	_____	_____
016	_____	_____	_____	_____	_____	_____	_____	_____
017	_____	_____	_____	_____	_____	_____	_____	_____
018	_____	_____	_____	_____	_____	_____	_____	_____
019	_____	_____	_____	_____	_____	_____	_____	_____
020	_____	_____	_____	_____	_____	_____	_____	_____

_____ Total Acres This Page Contact Range=_____to

Examined By: _____ Date: _____

EXHIBIT VII-11
WRS ACREAGE CONTACT LETTER
(Use Field Office Letterhead)

April 2, 2003

John Q. Wateruser
Bottomland Ranch
Floodplain, Montana 59999

RE: Claim No. 99Z-W999999-00

Dear Mr. Wateruser:

The Montana Water Court has begun the preliminary work necessary to issue a decree on all pre-July 1, 1973 water rights in the Bigwide River basin. At it's request, the Department of Natural Resources and Conservation (DNRC) staff is reviewing all the water right claims in the basin.

Your water right claims in the Bigwide River basin are currently being examined. The 1954 Wideopen County Water Resources Survey is being used to check whether claimed acres reflect the irrigation as it was prior to July 1, 1973. The review of claim number 992-W999999-00 (copy enclosed) has raised a question that cannot be answered from the information you submitted. You claimed 150 acres of irrigation. The 1954 Wideopen County Water Resources Survey reported only 78 acres of irrigation on the same place of use.

As required, the survey data will be reported to the Water Court along with the claimed acreage, if the discrepancy is unresolved. They may take action on the claim based on this discrepancy. If you have information that contradicts the survey, or feel your claimed acreage or place of use should be amended, please contact me.

Thank you for your time and cooperation.

Sincerely,

Al E. Quot
Water Rights Technician

Enclosure

NOTE: Using the field office microcomputer for this letter allows customizing and provides a clean original.

EXHIBIT VII-13

LIST OF IRRIGATION DISTRICTS
Alphabetical By County

NOTE: The following list was provided by the DNRC Engineering Bureau in the fall of 1987. Each district listed on it was incorporated under the requirements of 85-7-101 through 110, MCA. The list may not contain all districts having that type of incorporation.

BE	East Bench Irrigation District
BE	West Bench Irrigation District
BH	Big Horn Irrigation District
BH	Lower Little Horn & Lodge Grass Irrigation District
BH	Upper Little Horn Irrigation District
BL	Alfalfa Valley Irrigation District
BL	Fort Belknap Irrigation District
BL	Harley Irrigation District
BL	North Chinook Irrigation District
BL	Paradise Valley Irrigation District
BL	Zurich Irrigation District
BR	Toston Irrigation District
CS	Fort Shaw Irrigation District
LC	Helena Valley Irrigation District
LN	Glen Lake Irrigation District
MS	Big Flat Irrigation District
MS	Clinton Irrigation District
MS	Frenchtown Irrigation District
MS	Missoula Irrigation District
PH	Dodson Irrigation District
PH	Glasgow Irrigation District
PH	Malta Irrigation District
PI	Buffalo Rapids Irrigation District
RA	Bitterroot Irrigation District
RA	Blodgett Creek Irrigation District
RA	Canyon Creek Irrigation District
RA	Charlos Heights Irrigation District
RA	Daly Ditches Irrigation District
RA	Lomo Irrigation District
RA	Mill Creek Irrigation District
RA	Sunset Irrigation District
RA	Ward Irrigation District
RI	Intake Irrigation District
RI	Lower Yellowstone Project Irrigation District
RI	Savage Irrigation District
RS	Cartersville Irrigation District
RS	Hammond Irrigation District
TE	Bynum Irrigation District
TE	Greenfields Irrigation District
TR	Yellowstone Irrigation District
YE	Danford Irrigation District
YE	Huntley Project Irrigation District
YE	Lockwood Irrigation District
YE	Victory Irrigation District

EXHIBIT VII-13 (cont.)

LIST OF IRRIGATION DISTRICTS

Alphabetical By District

NOTE: The following list was provided by the DNRC Engineering Bureau in the fall of 1987. Each district listed on it was incorporated under the requirements of 85-7-101 through 110, MCA. The list may not contain all districts having that type of incorporation.

BL	Alfalfa Valley Irrigation District
MS	Big Flat Irrigation District
BH	Big Horn Irrigation District
RA	Bitterroot Irrigation District
RA	Blodgett Creek Irrigation District
PI	Buffalo Rapids Irrigation District
TE	Bynum Irrigation District
RA	Canyon Creek Irrigation District
RS	Cartersville Irrigation District
RA	Charlos Heights Irrigation District
MS	Clinton Irrigation District
RA	Daly Ditches Irrigation District
YE	Danford Irrigation District
PH	Dodson Irrigation District
BE	East Bench Irrigation District
BL	Fort Belknap Irrigation District
CS	Fort Shaw Irrigation District
MS	Frenchtown Irrigation District
PH	Glasgow Irrigation District
LN	Glen Lake Irrigation District
TE	Greenfields Irrigation District
RS	Hammond Irrigation District
BL	Harley Irrigation District
LC	Helena Valley Irrigation District
YE	Huntley Project Irrigation District
RI	Intake Irrigation District
YE	Lockwood Irrigation District
RA	Lomo Irrigation District
BH	Lower Little Horn & Lodge Grass Irrigation District
RI	Lower Yellowstone Project Irrigation District
PH	Malta Irrigation District
RA	Mill Creek Irrigation District
MS	Missoula Irrigation District
BL	North Chinook Irrigation District
BL	Paradise Valley Irrigation District
RI	Savage Irrigation District
RA	Sunset Irrigation District
BR	Toston Irrigation District
BH	Upper Little Horn Irrigation District
YE	Victory Irrigation District
RA	Ward Irrigation District
BE	West Bench Irrigation District
TR	Yellowstone Irrigation District
BL	Zurich Irrigation District

EXHIBIT VIII-1

DNRC QUESTIONNAIRE FOR DOMESTIC WATER USE CLAIMS

Claim No. _____

Claimant: _____

Please answer as completely and accurately as possible. If more space is needed, use additional sheets of paper. Be sure to put the claim number on any extra sheets.

1. Please describe the domestic use.
 - a. How many households on your property are currently using the water?

 - b. How many people are using the water? _____
 - c. How many acres of lawn and garden are you irrigating? _____
2. Please describe the physical status of your domestic system.
 - a. Is the water system in working order? _____
 - b. What physical evidence and structures are at the site (storage tanks, pipelines, pumps, etc.)? _____

 - c. If not presently being used, in what condition are the site and structures? _____

3. Priority date:
 - a. When was water first used on your property for domestic use? _____

 - b. What evidence can you provide to support the date of first water use? _____

 - c. If not presently being used, when was it last used for domestic purposes? _____
 - d. Do you have a Permit or Certificate by DNRC to appropriate water for this system? _____ If yes, what is the permit or certificate number? _____

4. Please describe the design of the water system.

a. Diversion structure and conveyance facility:

- (1) Method or type of diversion (pump, pipeline, dam, etc.): _____

- (2) Dimensions (pump size, rpm, etc.; headgate dimensions; pipeline dimensions; etc.): _____

- (3) Materials: _____
- (4) Date constructed: _____

b. Flow rate and volume:

- (1) What is the maximum flow rate of the system? _____
Has the flow rate ever been measured? _____
If yes, what were the results? _____
- (2) What is the maximum volume in acre-feet used per year (1 acre-foot = 325,851 gallons)? _____
How was the volume determined? _____

c. Period of use:

- (1) What times of the year has the water been used (months/days)? _____

- (2) How many hours per day (average) is the water system used? _____

5. Are there any other parties using the same water system? _____

If yes, please list the names. _____

Additional Remarks:

Person : Name: _____
Completing : Address: _____
Questionnaire : _____
(Please Print) : Phone No.: _____

Signature: _____ Date: _____

DOMESTIC USE QUESTIONNAIRE
PAGE 3

CLAIM NO. _____

FOR DEPARTMENT USE

Information Obtained: ☐ Sent To Claimant ☐ Telephone Interview
☐ Personal Interview ☐ Other: _____

Reason: ☐ DNRC Examination
☐ Other: _____

Time and
Location: _____

Reviewer: _____ Date: _____

Remarks: